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2007 Silvicultural Activities Report

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2007

Silvicultural Activities Report

including Annual Report on Clearcutting and Precommercial Activities

Compiled from the 2007 Landowner Reports and other survey instruments.
Data collected under the provisions of Title 12 MRSA §8885 and §8878-A

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Report Highlights

Harvesting and Land Use Changes

- 505,175 acres were harvested in 2007, a 4% decrease from 527,895 acres in 2006.
- 485,871 acres were "partially harvested" (partial and shelterwood totals) in 2007, a 3% decrease from 502,515 acres in 2006.
- The number of harvests reported increased slightly from 5,622 to 5,634 harvests.

Clearcutting:

1. The total area clearcut decreased, from 18,853 acres in 2006 to 12,054 acres in 2007. Clearcutting amounts to less than 3% of total harvested acres.
2. Landowners owning more than 100,000 acres in Maine created 88% of all clearcuts (10,611 acres).
3. Average clearcut size in 2007 was 21 acres. Landowners owning more than 100,000 acres had an average clearcut size of 22 acres. Landowners owning less than 100,000 acres had an average clearcut size of 14 acres. One clearcut larger than 75 acres was created in 2007.
4. The primary silvicultural reason for clearcutting reported by large landowners were the removal of poor quality, intolerant, under stocked, short lived or mature overstories where the retention of the residual overstory trees is not justified for further increase in value, as a source of seed, or for protection of the new stand.

Land Use Changes:

- Harvesting to convert land from forest management to some other land use increased 11% from 6,527 acres in 2006 to 7,250 acres in 2007.

Precommercial Silvicultural Activities

Herbicide Use:

- For site preparation increased 585%, from 142 acres in 2006 to 972 acres in 2007.
- To release crop trees from competing vegetation decreased 16%, from 11,683 acres in 2006 to 9,786 acres in 2007.

Timber Stand Improvement (TSI):

- Precommercial thinning of young stands with spacing saws decreased 21%, from 9,813 acres in 2006 to 7,792 acres in 2007.
81% of this activity was done by landowners owning more than 100,000 acres.

Planting:

- Tree planting increased 11%, from 4,121 acres in 2006 to 4,594 acres in 2007.
91% of the planting was by landowners owning more than 100,000 acres.

Forester Involvement

- In 2007, licensed foresters supervised harvesting on 364,931 acres, compared to 370,158 acres in 2006.
72% of all harvest acres in 2007 had a licensed forester involved; the same as 2006.
Licensed Forester supervision occurred on 24% (675 out of 2,816 harvests) of the harvests on small woodlots (≤ 100 acres) in 2007. This is a slight increase from 23% in 2006 (619 out of 2,679 harvests).

2007 Harvesting and Land Use Changes

| Commercial Harvest Information by Landowner Size and Type | | <u>Acres</u> | | | | | | |
|---|------------------------|------------------|-------------------------------|-------------|-------------------|----------|-----------------|---------------|
| | | Partial Harvests | Shelterwood | | | Clearcut | Land Use Change | Total Harvest |
| | | | Initial or Intermediate Entry | Final Entry | Total Shelterwood | | | |
| OwnershipType | Ownership Size | | | | | | | |
| Forest Industry Woodlands | 1 to 100 acres | 88 | 0 | 0 | 0 | 0 | 0 | 88 |
| | 101 to 1,000 acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1,001 to 100,000 acres | 2,453 | 2,051 | 893 | 2,944 | 506 | 38 | 5,941 |
| | 100,000 + acres | 29,597 | 17,586 | 23,034 | 40,620 | 4,079 | 0 | 74,296 |
| | SubTotal | 32,138 | 19,637 | 23,927 | 43,564 | 4,585 | 38 | 80,325 |
| Investor Timberlands | 1 to 100 acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 101 to 1,000 acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1,001 to 100,000 acres | 10,944 | 1,393 | 635 | 2,028 | 31 | 0 | 13,003 |
| | 100,000 + acres | 20,363 | 46,904 | 61,927 | 108,831 | 2,639 | 0 | 131,833 |
| | SubTotal | 31,307 | 48,297 | 62,562 | 110,859 | 2,670 | 0 | 144,836 |
| Non-Industrial Land | 1 to 100 acres | 49,883 | 2,598 | 3,076 | 5,674 | 299 | 3,024 | 58,880 |
| | 101 to 1,000 acres | 61,749 | 6,163 | 6,375 | 12,538 | 451 | 2,038 | 76,776 |
| | 1,001 to 100,000 acres | 40,133 | 5,068 | 16,408 | 21,476 | 144 | 1,207 | 62,960 |
| | 100,000 + acres | 21,571 | 21,141 | 18,436 | 39,577 | 3,761 | 6 | 64,915 |
| | SubTotal | 173,336 | 34,970 | 44,295 | 79,265 | 4,655 | 6,275 | 263,531 |
| Other Woodlands (Govt, etc.) | 1 to 100 acres | 201 | 0 | 0 | 0 | 0 | 82 | 283 |
| | 101 to 1,000 acres | 938 | 95 | 63 | 158 | 5 | 12 | 1,113 |
| | 1,001 to 100,000 acres | 1,927 | 940 | 431 | 1,371 | 7 | 838 | 4,143 |
| | 100,000 + acres | 10,072 | 221 | 514 | 735 | 132 | 5 | 10,944 |
| | SubTotal | 13,138 | 1,256 | 1,008 | 2,264 | 144 | 937 | 16,483 |
| 2007 Totals: | | 249,919 | 104,160 | 131,792 | 235,952 | 12,054 | 7,250 | 505,175 |
| Percent of 2007 Harvest: | | 49.47% | 20.62% | 26.09% | 46.71% | 2.39% | 1.44% | 100.00% |
| 2006 Totals: | | 266,406 | 117,735 | 118,374 | 236,109 | 18,853 | 6,527 | 527,895 |
| Percent Change from 2006 to 2007: | | -6% | -12% | 11% | 0% | -36% | 11% | -4% |

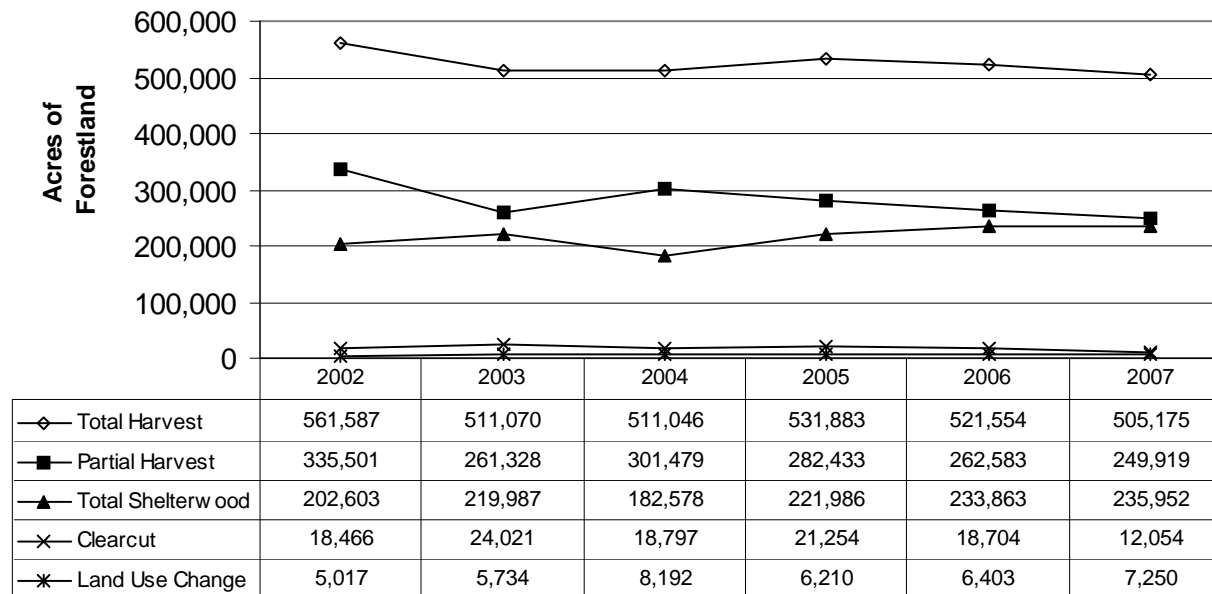
2007 Precommercial Activities and Professional Assistance

| OwnershipTypeOwnership Size | | Precommercial Activities by Landowner Size and Type | | | | Number of Reported | | Licensed Forester Involvement | |
|------------------------------|------------------------|--|---------|-------|------------------|--------------------------|--|----------------------------------|----------------|
| | | Acres | | | | | | by Landowner Size and Type | |
| | | Herbicide Use | | TSI | Tree Planting | | | Number of Harvests | Total Acres |
| | | Site Prep | Release | | | | | | |
| Forest Industry Woodlands | 1 to 100 acres | 0 | 0 | 0 | 0 | 3 | | 1 | 60 |
| | 101 to 1,000 acres | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| | 1,001 to 100,000 acres | 0 | 0 | 0 | 0 | 50 | | 40 | 4,549 |
| | 100,000 + acres | 0 | 5,789 | 4,162 | 2,226 | 172 | | 161 | 51,402 |
| | Subtotal | 0 | 5,789 | 4,162 | 2,226 | 225 | | 202 | 56,011 |
| Investor Timberlands | 1 to 100 acres | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| | 101 to 1,000 acres | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| | 1,001 to 100,000 acres | 300 | 825 | 0 | 92 | 19 | | 19 | 13,003 |
| | 100,000 + acres | 80 | 2,146 | 303 | 1,550 | 257 | | 239 | 121,478 |
| | Subtotal | 380 | 2,971 | 303 | 1,642 | 276 | | 258 | 134,481 |
| Non-Industrial Land | 1 to 100 acres | 2 | 27 | 228 | 28 | 2,797 | | 669 | 17,369 |
| | 101 to 1,000 acres | 0 | 9 | 665 | 162 | 1,616 | | 550 | 28,501 |
| | 1,001 to 100,000 acres | 500 | 100 | 601 | 136 | 391 | | 254 | 51,015 |
| | 100,000 + acres | 90 | 890 | 1,833 | 399 | 186 | | 169 | 61,694 |
| | Subtotal | 592 | 1,026 | 3,327 | 725 | 4,990 | | 1,642 | 158,579 |
| Other Woodlands (Govt, etc.) | 1 to 100 acres | 0 | 0 | 0 | 0 | 16 | | 5 | 79 |
| | 101 to 1,000 acres | 0 | 0 | 0 | 0 | 31 | | 21 | 1,067 |
| | 1,001 to 100,000 acres | 0 | 0 | 0 | 1 | 40 | | 36 | 4,056 |
| | 100,000 + acres | 0 | 0 | 0 | 0 | 56 | | 53 | 10,659 |
| | Subtotal | 0 | 0 | 0 | 1 | 143 | | 115 | 15,861 |
| 2007 Totals: | | 972 | 9,786 | 7,792 | 4,594 | 5,634 | | 2,217 | 364,932 |
| 2006 Totals: | | 142 | 11,683 | 9,813 | 4,121 | 5,622 | | 2,196 | 370,157 |
| Change from 2006 to 2007: | | 585% | -16% | -21% | 11% | 0% | | 1% | -1% |

Definitions:

| | |
|--------------------------|--|
| Ownership Type | Forest Industry Land: Woodlands owned by a forest products industry; usually most of the wood harvested is used by that industry. |
| | Investor Timberlands Woodlands owned by organizations, including Timberland Investment Management Organizations (TIMOs) and Real Estate Investment Trusts (REITs) that hold timberland assets as fiduciaries for the benefit of others. |
| | Non-Industrial Land: Woodlands privately owned but NOT by a forest industry. These include private individuals and other non-forest product industries. |
| | Other woodlands: Woodlands owned by other entities not listed above -- including local, state, federal, or tribal governments. |
| Types of Harvests | Partial Harvest: Harvest where trees are removed individually or in small (<5 acre) patches. |
| | Shelterwood: Harvest of mature trees from a forest site in two or more stages. The first stage removes only a portion of the trees to allow establishment of regeneration before the remaining trees are removed in subsequent harvest. |
| | Clearcut: Harvest on a site larger than 5 acres that results in a residual basal area of acceptable growing stock trees >4.5" DBH of less than 30 square feet per acre, unless after harvesting the site has a well-distributed stand of acceptable growing stock 3 feet tall for softwood and 5 feet for hardwoods (Overstory Removal). Refer to the latest copy of the Maine Forest Service Rules Chapter 20 for additional information. It can be found on the Maine Forest Service website at http://www.state.me.us/doc/mfs/rules_regs/index.htm |
| | Change of Land Use: Harvest conducted to convert forestland to another land use such as house lots, farm pastures, etc. |

Harvesting Trends in Maine 2002-2007



2007 Annual Report on Clearcutting and Precommercial Activities

Compiled from the 2007 Landowner Reports and other survey instruments. Data collected under the provisions of the Forest Resources Assessment Program, 12 MRSA § 8878-A

| County | Large Landowners (own >100,000 acres) | | | | | | | | | | All Other Landowners | | | | All Landowners |
|--------------|---------------------------------------|---------|------------------------------|-------|--|-----|-------|----|-----------|-----------|----------------------|---------|-----------|-----------|----------------|
| | Precommercial Activities | | Clearcuts > 75 acres in size | | Purpose for Clearcut (see explanation below) | | | | | | <u>Acres</u> | | | | |
| | <u>Acres</u> | | # | Acres | 1 | 2 | 3 | 4 | Sub Total | Avg. Size | TSI | Planted | Clearcut | | |
| | TSI | Planted | | | | | | | | | | | Sub Total | Avg. Size | |
| Androscoggin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 8 | 8 | 8 |
| Aroostook | 2,695 | 3,052 | 0 | 0 | 4,260 | 0 | 0 | 0 | 4,260 | 23 | 131 | 22 | 100 | 13 | 4,360 |
| Cumberland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 19 | 10 | 19 |
| Franklin | 95 | 0 | 1 | 229 | 226 | 0 | 401 | 0 | 627 | 39 | 8 | 0 | 517 | 21 | 1,144 |
| Hancock | 0 | 0 | 0 | 0 | 0 | 90 | 80 | 0 | 170 | 19 | 105 | 1 | 145 | 16 | 315 |
| Kennebec | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 145 | 26 | 9 | 26 |
| Knox | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 5 | 5 |
| Lincoln | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 30 | 10 | 30 |
| Oxford | 420 | 0 | 0 | 0 | 29 | 0 | 170 | 0 | 199 | 13 | 430 | 25 | 75 | 11 | 274 |
| Penobscot | 239 | 281 | 0 | 0 | 374 | 0 | 0 | 0 | 374 | 25 | 100 | 75 | 63 | 13 | 437 |
| Piscataquis | 603 | 435 | 0 | 0 | 159 | 0 | 391 | 48 | 598 | 23 | 20 | 0 | 98 | 12 | 696 |
| Sagadahoc | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 | 13 |
| Somerset | 1,970 | 406 | 0 | 0 | 3,728 | 0 | 572 | 0 | 4,300 | 20 | 93 | 98 | 162 | 12 | 4,462 |
| Waldo | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 1 | 36 | 7 | 36 |
| Washington | 276 | 0 | 0 | 0 | 0 | 42 | 29 | 0 | 83 | 16 | 210 | 45 | 136 | 23 | 219 |
| York | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 6 | 10 | 5 | 10 |
| State Total: | 6,298 | 4,174 | 1 | 229 | 8,776 | 132 | 1,643 | 48 | 10,611 | 22 | 1,494 | 419 | 1,443 | 14 | 12,054 |

Purposes for creating clearcut:

1. Removal of poor quality, intolerant, under stocked, short lived or mature overstories where the retention of the residual overstory trees is not justified for further increase in value, as a source of seed, or for protection of the new stand.
2. Ecologically appropriate improvement or creation of wildlife habitat.
3. Removal of stands that, if partially harvested according to accepted silvicultural practice, are at high risk for windthrow due to factors such as soils, rooting depth, crown ratio or stem quality.
4. Harvesting of an existing plantation or other forest stand established by or previously treated with precommercial silvicultural activities.

Frequency Distribution of Clearcutting for Large Landowners who own more than 100,000 acres

2007 Clearcut as
percent of statewide
ownership

of Landowners

Clearcut Acres

0% - 0.001%

16

690

0.001%-0.25%

6

5,957

0.26%-0.75%

2

3,964

0.76%-1.00%

0

0